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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,191	12/21/2000	Toshiyuki Hasegawa	0666.1640000	7023

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EXAMINER

LUM, LEE S

ART UNIT	PAPER NUMBER
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3611

DATE MAILED: 05/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/741,191

Applicant(s)

HASEGAWA, TOSHIYUKI

Examiner

Ms. Lee S. Lum

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 2/27/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. An Amendment was filed 1/6/03, and an RCE on 2/27/03, which incorporated amended claims.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claims 11, 23, 32 and 45, the language "wherein power is transmitted directly to one of said output members/first transmission member" is unclear because it does not correspond to descriptions in the spec, either in the "Brief Summary" or "Detailed Description of the Invention". In the latter section, the spec describes specific elements such as "first/second PTO shafts", "drive shaft(s)", "clutch", and "differential", not (ambiguous) ones such as "input member", "output member", and "first/second transmission member". Without specific element names, this limitation, and other similar ones, cannot be understood or verified.

Of course, the Applicant is free to use whatever terms and labels he/she wishes, however, this latitude is detrimental here because the invention cannot be discerned. It is highly recommended that element labels be amended to corroborate with those employed in the spec, particularly, "first/second transmission members" and "input/output means/members".

In Claims 11, 23 and 45, the language "wherein power is transmitted directly to one of said output members" (emphasis added) is additionally unclear because there exists at least two possible interpretations.

One, the emphasized phrase appears to contradict the function of the "input member", which usually receives power (directly) from a power source, as corroborated in the spec on the bottom of p 3, "Power is transmitted through the first power dividing means" (implying the input means transmitting power from the engine to the first power dividing means).

Two, the emphasized phrase contradicts the subsequent "and said power dividing means differentially shares power transmitted into said input member between said pair of output members" (emphasis added), where dichotomy exists between the emphasized phrases.

And, lastly, as indicated above, this limitation cannot be verified in the spec. Clarification is required.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3A. **Claims 1, 3-6 and 32-38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wernick 6085853 in view of Vangsgard 6364041.

Re Claims 1 and 3-6 (1 as best understood), Wernick discloses a multi-wheel vehicle, best depicted in Figs 1 and 3, comprising

three or more axles 1-4, where one is frontmost steering axle 14,
first 11, and second 13, shafts/transmission members ,
wherein the steering axle interlocks with the second shaft,
and one of the other axles interlocks with the first shaft, and,
clutch/power dividing means 42 interposed between the shafts, permitting different speeds for each shaft via differential 8, with receipt of power from the first transmission member.

The patent does not disclose the prime mover as between two nonsteerable axles, while Vangsgard shows this arrangement in Fig 2 with prime mover 20. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this arrangement, as shown in Vangsgard, for applications requiring decreased weight towards the rear of the vehicle.

Re **Claims 11-18, 23-27 and 45-51 (11, 23 and 45 as best understood)**, Wernicke further discloses

input shaft 6,
coaxial output shafts 11/12 with respective differential side gears (Col 3, lines 38-40), and,
differential 8 between the shafts.

Re **Claims 32-38 (32 as best understood)**, Wernicke further discloses
engine (inherent) which powers one (main device 8) of three or more transaxle devices
8/9/18/20, including frontmost steering device 14,
wherein power is transmitted from the main device to the first shaft.

3B. **Claims 7-10, 19-22, 28-31, 41-44 and 54-57** are rejected under 35 U.S.C. 103(a) as
being unpatentable over Wernick in view of Vangsgard, and in further view of Stieg 4462271.

Re **Claims 7, 8, 10, 19, 20, 22, 28-31, 41-44 and 54-57**, the previous patents do not
explicitly show a braking system, while Stieg discloses
brake halves 52/54 (hydraulic ("wet") - Col 3, lines 24-25), pedal (inherent), and,
differential means 100 for locking the output shafts together (Col 5, second full
paragraph).

It would have been obvious to one with ordinary skill in the art at the time the invention
was made to include brakes so that the vehicle may be stopped, as shown in Stieg. Also, it
would have been obvious to use hydraulic brakes, as this type is in wide use, and as is very well-
known in the art.

Re **Claims 9, 21 and 30**, the previous patents do not explicitly disclose that the
nonsteerable axle includes a brake, but official notice is made of the fact that either a steerable
or nonsteerable axle can have a brake.

3C. **Claims 39 and 52** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wernick in view of Vangsgard, and in further view of Kaspar 5848664.

Wernick in view of Vangsgard does not disclose a continuously-variable transmission, while Kaspar shows this element 35. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this element, as shown in Kaspar, in order to increase the efficiency of drive power to the wheels according to the load conditions.

3D. **Claims 40 and 53** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wernick in view of Vangsgard and Kaspar, and in further view of Krettenauer et al 4639008.

The previous patents do not disclose a power take-off (PTO) unit, while Krettenauer shows this element 8. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include PTO, as shown in Krettenauer, to increase torque capabilities of the drive system, thus increase drive power under different load conditions.

3E. **Claims 58 and 59** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wernick in view of Vangsgard, and in further view of Wohlfarth 4823897.

The previous patents do not disclose a first drive train disposed at one lateral side of the vehicle, and a second drive train opposite the first, while Wohlfarth shows this configuration. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this arrangement, as shown in Wohlfarth, to evenly divide the weight of the drive trains within the vehicle, so to increase driving and steering performance, as well as to effect easy access to each drive train for repair and maintenance.

4. RESPONSE TO REMARKS


Examiner reiterates her rejections as provided above on grounds of issues of clarity with Claims 1, 11, 23, 32 and 45. The claim language emphasized above is unclear such that the invention simply cannot be understood. These issues do not advance Applicant's arguments that Wernicke, etc, do not obviate these limitations.

5. Communication with the Examiner and USPTO

Any inquiry concerning this communication should be directed to Ms. Lum at (703) 305-0232, 9-530, M-F. Our fax numbers are (703) 872-9326, 872-9327 for after-final comms, and 308-2571 for comms having given prior notice to the examiner. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer assistance at (703) 306-5771.

Ms. Lee S. Lum
Examiner
5/9/03




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